

Application No.: 10/756,788 Amendment A, contd.

Claims

Cancel the complete section for "CLAIMS" and substitute
CLAIMS as follows:

What is claimed as being new and desired to be protected by
LETTERS PATENT of the United States is as follows:

1. A new and improved tool for the removal of both
metric and standard damaged fasteners, in
combination:

a socket head having a cylindrical external
configuration with an upper end and a lower end and an
axis with a first axial length therebetween and with a
square recess in the interior of the upper end adapted
to receive the end of a ratchet wrench and multiple
flats on the exterior to allow adaptation of a wrench
or socket, the lower end of the socket head being
fabricated with a major recess of a generally
frustroconical configuration, the major recess having
an interior surface formed with a plurality of
inverted helix L-shaped projections and depending on
the fastener the angle of each tooth will be between
102 degree and 105.30 degree but the optimum angle is

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105 degrees and extending radially inwardly at a 12 degree helix and a radius at the bottom of each leg connecting the inverted L-shaped projections, integral with the socket and extending radially inwardly from the lower end, thereby forming a plurality of angles with radially interior teeth, each of the angles having an apex with two faces of uncommon lengths, the faces of each angle being offset from the radius of the cylinder, the apex of each tooth being angularly oriented with respect to the axis of the cylinder, the axial interior of the major recess having a smaller diameter than the axial exterior of the major recess, the major recess continuing through the socket head beyond the projections with a width greater than the diameter of the major recess at its axial interior whereby when placed over a rounded off head of a damaged fastener, a portion thereof will extend beyond the projections, and the socket head is rotated with a ratchet motion, the teeth will pull downwardly over the damaged fastener and bite into its exterior surface to effect a coupling therebetween for rotation of the socket head and associated damaged fastener to effect its removal.

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2. A device for the removal of both metric and standard undamaged fasteners comprising:

a socket head having a all the data in claim 1 in addition this tool will accept an undamaged fastener, whereby the apex of each tooth on the tool lands behind the fasteners points and the fasteners points fall behind the left leg of the tooth during removal, in addition because each tooth is on a helix, each tooth has a greater landing area onto the fastener and the hexagon design continues the length of the interior to effect a coupling therebetween for rotation of the socket head and associated fastener to effect its removal.

3. The device as set forth in claim 1 and 2 wherein the intersection of flats on the head forms a V-shaped point which fits snugly into the inverted L-shaped helix when the tool is placed over an undamaged fastener.

4. This same inverted L-shaped design can also be implemented into a wrench or a ratchet with and with less helix and less taper.